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EXAMINER	
SPAHN, GAY	

ART UNIT	PAPER NUMBER
3673	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/859,706	CHAFFEE, ROBERT B.	
	Examiner	Art Unit	
	Gay Ann Spahn	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-18,20-31,33,36-47 and 49-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27,28,44,47,49,51 and 56* is/are allowed.

6)☒ Claim(s) *1-3,5-18,20,22,23,25,29-31,33,36-43,50,54,55,57 and 58* is/are rejected.

7)☒ Claim(s) *18,42,45,46,50 and 52-54* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 May 2001 and 17 December 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/2/05 & 11/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 May 2005 has been entered.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 02 May 2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

However, it should be noted that on the 18th line of the IDS, Applicant lists U.S. Patent No. 5,025,894 as being issued to Richard M. Rimington on October 01, 1991. U.S. Patent No. 5,025,894 is actually a patent that was issued to Shinzi Yamasaki on June 25, 1991 and is not at all related to inflatable bladders having fluid controllers as is the subject matter of the present invention. Therefore, U.S. Patent No. 5,025,894 has been lined out as not being considered by the examiner.

In addition, the references listed on the 20th line (U.S. Patent No. 5,903,941), 22nd line (U.S. Patent No. 6,287,095), and 30th line (Japanese Patent Application Publication

No. 405137809A) of the present IDS have been lined out because they have been listed on previous Notices of References Cited by the Examiner (PTO-Form-892) and therefore, have already been considered. More particularly, U.S. Patent No. 5,903,941 to Shafer et al. and Japanese Patent Application Publication No. 405137809A to Nagashima was listed on a Notice of References Cited sent with the Office Action mailed on 26 March 2003, and U.S. Patent No. 6,287,095 to Saputo et al. was listed on a Notice of References Cited sent with the Office Action mailed on 04 May 2004.

Finally, the reference listed on the 32nd line of the IDS (i.e., only reference listed on page 2 of 2 - "Image of Aero product - inflatable bed; Approx. 2002") has been lined through as not being considered by the examiner since Applicant has only listed an approximate publication date and have not listed the true publication date as is required by 37 C.F.R. § 1.98(b)(5). Furthermore, it is not at all clear that the "Image of Aero product - inflatable bed" was ever published.

Allowable Subject Matter

Claims 27, 28, 44, 47, 49, 51, and 56 are allowed. The following is an examiner's statement of reasons for allowance:

claims 27 and 28 recite the limitation of "a self-sealing valve, wherein a second switch is electrically connected to the self-sealing valve of the fluid controller, such that it may selectively open the self-sealing valve" which is not shown by any of the prior art references of record; and

claims 44, 47, 49, 51, and 56 all recite the limitation that "at least a portion of the fluid controller that is positioned within the profile of the bladder being accessible from the exterior of the bladder" which is not shown by any of the prior art references of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 3, 14, 39, and 58 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 18 and 42 would be allowable if rewritten to overcome both the rejection under 35 U.S.C. 112, 2nd paragraph, and the claim objection, (both rejection and objection as set forth below in this Office action), and to include all of the limitations of the base claim and any intervening claims.

Claim 45 would be allowable if rewritten or amended to overcome the claim objection as set forth below in this Office action.

Claim 46 would be allowable if rewritten to overcome the claim objection as set forth below in this Office action, and to include all of the limitations of the base claim and any intervening claims.

Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The indicated allowability of claims 1-3, 5-26, 29-31, 33, and 36-43, 45, 46, 48-50, 52-55, 57, and 58 in the Office Action made final and mailed on 03 December 2004 is withdrawn in view of the second embodiment of the reference to Chung (U.S. Patent No. 6,332,760) which it is believed was never applied by the previous examiner (i.e., the previous examiner only applied the first embodiment of the Chung reference to the claims as is evidenced by her references to pump (20) as disclosed in the first embodiment and no references to pump (30) as disclosed in the second embodiment). Rejections based on the second embodiment of the Chung reference follow.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "90" has been used to designate both the housing (90) connected to the flange (82) as shown in Fig. 3 and the housing or covering around the motor (84), impeller (86), conduit (88), solenoid (104), etc. as shown in Fig. 5. There

appears to be two different structures which Applicant is referring to as a "housing" and these two different structures are being confused with each other. Each of the two different structural elements should be given a separate reference numeral. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference numerals "83" and "90" have both been used to designate "fluid impermeable wall" (see Fig. 5) and "housing" (see Fig. 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

(1) page 1, line 3, after "U.S.", the word --Provisional-- should be inserted and after "Application", the word --Serial-- should be inserted;

(2) page 1, line 4, after "U.S.", the word --Provisional-- should be inserted and after "Application", the word --Serial-- should be inserted;

(3) page 2, line 11, after the second occurrence of the word "comprising", the word --a-- should be inserted;

(4) page 2, line 13, the first occurrence of the word "a" should be changed to --an--;

(5) page 6, line 14, the reference numeral "100" should be changed to --80--;

(6) page 6, line 21, the "o" at the beginning of the line should be changed to --of--; and

(7) page 10, line 1, the word "Claims" should be deleted as according to the Manual of Patent Examining Procedure (MPEP) § 608.01(m), it is U.S. Patent and Trademark Office Procedure to insist that each claim must be the object of a sentence starting with "I (or we) claim," "The invention claimed is" (or equivalent) and this is already exists on page 9, line 1.

Appropriate correction is required.

Claim Objections

Claims 50 and 52-54 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. The recitation that "the bladder forms a mattress" does not further limit the subject matter of the previous claims because it does not add any structural limitations.

Claim 18 is objected to because of the following informalities: the recitation in line 1 that "the member is a stem" is not supported by the specification because the only instance of the word "stem" in the specification is at the last line of page 4 and that occurrence does not provide support for the recitation of "a stem" in claim 18. Therefore, since there appears to be support for "a stem" in the original disclosure (i.e., original drawing Figs. 5 and 7), the examiner suggests that Applicant amend the specification to describe the stem. However, no new matter should be added.

Appropriate correction is required.

Claims 42 and 46 are objected to because of the following informalities: claim 42, lines 1-2, the recitation that "the fluid controller is configured to permit air to exit the bladder at a user selectable rate" and claim 46, lines 1-2, the recitation that "the user interface is configured to permit a user to release air from the bladder at a selectable rate" do not appear to have antecedent basis in the specification (see 37 CFR

1.75(d)(1) and the Manual of Patent Examining Procedure (MPEP) § 608.01(o)) because the examiner cannot find where the specification explicitly states that air may be exhausted from the bladder at a user selectable rate. If support for this limitation appears in the specification, please direct the examiner's attention to the page and line numbers. Otherwise, the claims should be cancelled.

Appropriate correction is required.

Claims 45 and 46 are objected to because of the following informalities: claim 45, lines 11-12, the recitation of "a user interface mechanically coupled to the valve, the user interface being adapted to permit a user to mechanically manipulate the valve" and claim 46, lines 1-2, the recitation that "the user interface is configured to permit a user to release air from the bladder at a selectable rate" do not appear to have antecedent basis in the specification (see 37 CFR 1.75(d)(1) and the Manual of Patent Examining Procedure (MPEP) § 608.01(o)) because the examiner cannot find where the specification explicitly states anything about a "user interface." If support for this limitation appears in the specification, please direct the examiner's attention to the page and line numbers. Otherwise, the claims should be cancelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-18, 29-31, 33, 36-43, 50, 54, 55, 57, and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, lines 3-7, recite "a fluid controller comprising an electrically powered pump, the pump being disposed at least partially within a profile of the bladder, and the fluid controller being coupled to the inflatable bladder in a position, and in the position the fluid controller being adapted to permit air to exit the bladder through the fluid controller and to be provided to the bladder through the fluid controller." However, the "pump" is not given a reference numeral so that it can be clearly identified what is the difference between the fluid controller (80) and the pump. Are the fluid controller and the pump the same thing or is there a difference between the fluid controller and the pump? The recitation in lines 3-7 of claim 1 is confusing because it states that the fluid controller comprises an electrically powered pump which intimates that the fluid controller is more than just the pump, but then the claim recites that the pump is disposed at least partially within the profile of the bladder and the fluid controller is coupled to the bladder. This seems to indicate that the fluid controller and the pump are interchangeable. Therefore, clarification is required as to what makes up the fluid controller and what makes up the pump.

As to claim 30, lines 3-7, recite "a fluid controller comprising an electrically powered pump; wherein the fluid controller is fixedly connected to the bladder in a position such that the pump is located only partially within a profile of the bladder, and

when in the position, the fluid controller is adapted to permit air to exit the bladder through the fluid controller and be provided to the bladder through the fluid controller." The examiner notes that the "pump" is not given a reference numeral so that it can be clearly identified what is the difference between the fluid controller (80) and the pump. Are the fluid controller and the pump the same thing or is there a difference between the fluid controller and the pump? The recitation in lines 3-7 of claim 30 is confusing because it states that the fluid controller comprises an electrically powered pump which intimates that the fluid controller is more than just the pump, but then the claim recites that the pump is disposed only partially within the profile of the bladder and the fluid controller is fixedly coupled to the bladder. This seems to indicate that the fluid controller and the pump are interchangeable. Therefore, clarification is required as to what makes up the fluid controller and what makes up the pump.

As to claims 5, 6, 8, 9, and 26, all recite a "housing" which is confusing because the specification and drawings are not clear as to what structure constitutes the housing (i.e., is it the structure connected to the flange (82) as shown in Fig. 3 or is it the structure surrounding the motor (84), impeller (86), conduit (88), solenoid (104), etc. as shown in Fig. 5?). If there are two housings (i.e., a housing for the pump as shown by reference numeral "90" in Fig. 5 and a housing which the pump (within its own pump housing) fits into as shown by reference numeral "90" in Fig. 3, then it should be made clear in the claims when the pump housing is being referred to and when the housing connected to the flange is being referred to.

As to claim 10, lines 1-2, recite that "a remainder of the fluid controller is constructed and arranged to be removable from the flange" and this is confusing because it is not understood what "a remainder of the fluid controller" is referring to.

As to claim 58, lines 5, 7, and 7-8, recite the "inflatable bladder" which is confusing because there is no antecedent basis for the term "inflatable bladder." Is Applicant trying to refer back to the "fluid-impermeable bladder" recited in line 3 of the claim or the "inflatable device" recited in line 1 of the claim?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 5-14, 16, 17, 20, 22, 23, 25, 29-31, 33, 36-38, 40, 41, 43, 50, 52, 54, 55, and 57 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung (U.S. Patent No. 6,332,760).

As to claim 1, Chung discloses an inflatable device, comprising:

a substantially fluid impermeable bladder (26); and

a fluid controller (30) comprising an electrically powered (i.e., batteries) pump (30), the pump (30) being disposed at least partially within a profile of the bladder (see Figs. 6A, 6B, 6C, 7A, and 7B), and the fluid controller (30) being coupled to the inflatable bladder in a position (i.e., socket (34)), and in the position (i.e., the socket (34)) the fluid controller (30) being adapted to permit air to exit the bladder through the fluid controller (see Figs. 7A and 7B for deflation operation) and to be provided to the bladder through the fluid controller (see Figs. 6A, 6B, and 6C for inflation operation).

The examiner notes that "[d]uring patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification." See *In re Prater*, 162 USPQ 541 (CCPA 1969). Therefore, the examiner notes that the language in claim 1 that "the fluid controller being coupled to the inflatable bladder in a position, and in the position the fluid controller being adapted to permit air to exit the bladder through the fluid controller and to be provided to the bladder through the fluid controller" is very broadly and open to interpretation. It is the examiner's interpretation that although electric pump (30) of the second embodiment of the Chung reference is turned around or reversely fitted within the socket depending upon whether the bladder is being inflated (see Figs. 6A, 6B, and 6C, wherein the air inlet (304) of pump (30) is facing outwardly away from the interior of the bladder) or the bladder is being deflated (see Figs. 7A and 7B, wherein the air inlet (304) of pump (30) is facing inwardly towards the interior of the bladder), the "position" of the fluid controller for receiving or

exhausting air is the socket (34). Therefore, the examiner deems that in giving claim 1 its broadest reasonable interpretation, it reads on the Chung reference.

As to claim 2, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the fluid controller is constructed and arranged such that a majority of the fluid controller is positioned within the profile of the bladder (see Figs. 6B and 7B).

The examiner notes that a majority is 51% and as such, it is the examiner's interpretation that at least 51% of the fluid controller is positioned within the profile of the bladder in both Fig. 6B and Fig. 7B of Chung.

As to claim 5, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses the fluid controller (30) comprises a housing (see Fig. 4 - structure which pump (30) fits into).

As to claim 6, Chung discloses the inflatable device of claim 5 as discussed above, and Chung also discloses that the housing (Fig. 4) comprises a flange (see Fig. 4 - outer periphery of housing beyond dashed line) impermeably connected to the bladder (26).

As to claim 7, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the fluid controller (30) comprises a flange (see Fig. 4 - outer periphery of housing beyond dashed line) impermeably connected to the bladder (26).

As to claim 8, Chung discloses the inflatable device of claim 7 as discussed above, and Chung also discloses that the flange (see Fig. 4 -outer periphery of housing

beyond dashed line) comprises a fluid impermeable wall (walls of socket 34) that connects to a housing of the inflatable device.

As to claim 9, Chung discloses the inflatable device of claim 8 as discussed above, and Chung also discloses that the flange (see Fig. 4 - outer periphery of housing beyond dashed line) is in contact with the housing at an outlet of the housing.

As to claim 10, Chung discloses the inflatable device of claim 7 as discussed above, and Chung also discloses that a remainder of the fluid controller (30) is constructed and arranged to be removable from the flange (see Fig. 4 - outer periphery of housing beyond dashed line).

As to claim 11, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the fluid controller (30) comprises a first locking mechanism (342) and an adjustment device (on side of pump (30)) including a second locking mechanism (301) sized and adapted to mate with the first locking mechanism.

As to claim 12, Chung discloses the inflatable device of claim 11 as discussed a above, and Chung also discloses that the adjustment device (on side of pump (30)) further comprises :

a first switch (one of 302's shown in Fig. 4) electrically connected to the pump (30) and a power source (batteries in built-in battery case (32)) such that the first switch may selectively energize the pump (30); and

a second switch (one of 302's shown in Fig. 4) mechanically connected to a valve of the fluid controller (30) such that it may selectively open the valve (304 or 306);

wherein the first switch and second switch are in fixed proximity to one another (see Fig. 4).

The examiner notes that Merriam-Webster's Collegiate® Dictionary (Tenth Edition, Copyright 1997, published by Merriam-Webster, Incorporated, Springfield, Massachusetts, U.S.A.) defines a valve as "any of numerous mechanical devices by which the flow of liquid, gas, or loose material in bulk may be started, stopped, or regulated by a movable part that opens, shuts or partially obstructs one or more ports or passageways." Thus, the air inlet (304) and the air outlet (306) constitute valves.

As to claim 13, Chung discloses the inflatable device of claim 12 as discussed above, and Chung also discloses that the adjustment device (on side of pump (30)) further comprises a top portion and the first switch (one of 302's shown in Fig. 4) and the second switch (one of 302's shown in Fig. 4) are positioned on the top portion (see Fig. 4).

As to claim 14, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses an adjustment device (on side of pump (30)), including:

a first switch (one of 302's shown in Fig. 4) electrically connected to the pump (30) and a power source (built-in battery case (32)) such that the first switch (one of 302's shown in Fig. 4) may selectively energize the pump (30); and

a second switch (one of 302's shown in Fig. 4) electrically connected to a power source (built-in battery case (32)) and electro-mechanically connected to a valve (304 or 306) of the fluid controller (30) such that it may selectively open the valve (304 or 306).

The examiner notes that Merriam-Webster's Collegiate® Dictionary (Tenth Edition, Copyright 1997, published by Merriam-Webster, Incorporated, Springfield, Massachusetts, U.S.A.) defines a valve as "any of numerous mechanical devices by which the flow of liquid, gas, or loose material in bulk may be started, stopped, or regulated by a movable part that opens, shuts or partially obstructs one or more ports or passageways." Thus, the air inlet (304) and the air outlet (306) constitute valves.

As to claim 16, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the fluid controller (30) comprises a valve (304 or 306) and a member connected to the valve that moves the valve between an open and a closed position.

The examiner notes that Merriam-Webster's Collegiate® Dictionary (Tenth Edition, Copyright 1997, published by Merriam-Webster, Incorporated, Springfield, Massachusetts, U.S.A.) defines a valve as "any of numerous mechanical devices by which the flow of liquid, gas, or loose material in bulk may be started, stopped, or regulated by a movable part that opens, shuts or partially obstructs one or more ports or passageways." Thus, the air inlet (304) and the air outlet (306) constitute valves.

As to claim 17, Chung discloses the inflatable device of claim 16 as discussed above, and Chung also discloses that the member is adapted to be actuated by a switch on an adjustment device.

As to claim 29, Chung discloses the inflatable device of claim 7 as discussed above, and Chung also discloses that the flange (see Fig. 4 -outer periphery of housing beyond dashed line) comprises a recess (see Fig. 4).

As to claim 36, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that a recess (see Fig. 4) is formed by the fluid controller (30).

As to claim 37, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the pump (30) is at least partially positioned within a recess in the wall of the bladder (26).

As to claim 38, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the pump (30) is entirely external to the bladder (26).

As to claim 40, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the pump (30) is externally accessible.

As to claim 41, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses a flange (see Fig. 4 -outer periphery of housing beyond dashed line) impermeably connected to the bladder (26), the flange forming a recess, wherein the pump (30) is at least partially positioned within the profile of the bladder (26).

As to claim 43, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the pump (30) is at least partially external to the bladder (26).

As to claim 50, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the bladder (26) forms a mattress (col. 2, line 16, wherein it states "airbed").

As to claim 55, Chung discloses the inflatable device of claim 1 as discussed above, and Chung also discloses that the fluid controller (30) comprises a valve (304 or 306) through which the air exits the bladder (26).

The examiner notes that Merriam-Webster's Collegiate® Dictionary (Tenth Edition, Copyright 1997, published by Merriam-Webster, Incorporated, Springfield, Massachusetts, U.S.A.) defines a valve as "any of numerous mechanical devices by which the flow of liquid, gas, or loose material in bulk may be started, stopped, or regulated by a movable part that opens, shuts or partially obstructs one or more ports or passageways." Thus, the air inlet (304) and the air outlet (306) constitute valves.

As to claim 20, Chung discloses an inflatable system, comprising:

a substantially fluid impermeable bladder (26); and

a fluid controller (30) comprising:

a pump (30) in fluid communication with the bladder (26) through a valve (304 or 306) and comprising a first locking mechanism (342); and

an adjustment device (on side of pump (30)) including a first switch (one of 302's) mechanically connected to the valve (304 or 306) and adapted to mechanically actuate the valve (304 or 306), and a second locking mechanism (301) sized and adapted to mate with the first locking mechanism (342).

As to claim 21, Chung discloses the inflatable system of claim 20 as discussed above, and Chung also discloses that the adjustment device further comprises:

a top portion;

a second switch (one of 302's) having a first position and a second position, positioned on the top portion and electrically connected to the pump (30) and a power source (built-in battery case (32)); and

wherein the first switch is positioned on the top portion.

As to claim 22, Chung discloses the inflatable system of claim 20 as discussed above, and Chung also discloses that the pump (30) is an electrically powered pump and the fluid controller (30) is at least partly positioned within the profile of the bladder (26).

As to claim 23, Chung discloses the inflatable system of claim 22 as discussed above, and Chung also discloses that a majority of the fluid controller (30) is positioned within the profile of the bladder (26).

The examiner notes that a majority is 51% and as such, it is the examiner's interpretation that at least 51% of the fluid controller is positioned within the profile of the bladder in both Figs. 6B and Fig. 7B of Chung.

As to claim 25, Chung discloses the inflatable system of claim 22 as discussed above, and Chung also discloses that the bladder (26) includes a recess sized and configured to accommodate at least a portion of the fluid controller (30).

As to claim 26, Chung discloses the inflatable system of claim 22 as discussed above, and Chung also discloses that the fluid controller (30) includes a housing (see Fig. 4) and the housing includes a flange (see Fig. 4 -outer periphery of housing beyond dashed line) that connects to the bladder (26).

As to claim 52, Chung discloses the inflatable system of claim 20 as discussed above, and Chung also discloses that the bladder (20) forms a mattress (col. 2, line 16, wherein it states "airbed").

As to claim 30, Chung discloses an inflatable device, comprising:

a substantially fluid impermeable bladder (26); and

a fluid controller (30) comprising an electrically powered pump (30);

wherein the fluid controller (30) is fixedly connected to the bladder (26) in a position such that the pump (30) is located only partially within a profile of the bladder (26), and when in the position, the fluid controller (30) is adapted to permit air to exit the bladder (26) through the fluid controller (30) and be provided to the bladder (26) through the fluid controller (30).

The examiner notes that "[d]uring patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification." See *In re Prater*, 162 USPQ 541 (CCPA 1969). Therefore, the examiner notes that the language in claim 1 that "the fluid controller being coupled to the inflatable bladder in a position, and in the position the fluid controller being adapted to permit air to exit the bladder through the fluid controller and to be provided to the bladder through the fluid controller" is very broadly and open to interpretation. It is the examiner's interpretation that although electric pump (30) of the second embodiment of the Chung reference is turned around or reversely fitted within the socket depending upon whether the bladder is being inflated (see Figs. 6A, 6B, and 6C, wherein the air inlet (304) of pump (30) is facing outwardly away from the interior of the bladder) or the bladder is being deflated

(see Figs. 7A and 7B, wherein the air inlet (304) of pump (30) is facing inwardly towards the interior of the bladder), the "position" of the fluid controller for receiving or exhausting air is the socket (34). Therefore, the examiner deems that in giving claim 1 its broadest reasonable interpretation, it reads on the Chung reference.

Further, with respect to the recitation that "the fluid controller is fixedly connected to the bladder", it is the examiner's interpretation that when the fluid controller or pump (30) is attached to the housing shown in Fig. 4 and when the housing is in turn attached to the bladder, the fluid controller or pump is fixedly connected to the bladder through the housing in the sense that it cannot be easily detached without application of some force. The examiner notes that this reasoning is similar to Applicant's discussion at the bottom of page 8 of the specification (see lines 24-25), wherein he explains that by "lock" it is meant that two mechanisms fit together in such a way that a force must be overcome to separate them.

As to claim 31, Chung discloses the inflatable device of claim 30 as discussed above, and Chung also discloses that the fluid controller (30) is constructed and arranged such that a majority of the fluid controller (30) is positioned within the profile of the bladder (26).

The examiner notes that a majority is 51% and as such, it is the examiner's interpretation that at least 51% of the fluid controller is positioned within the profile of the bladder in both Fig. 6B and Fig. 7B of Chung.

As to claim 33, Chung discloses the inflatable device of claim 30 as discussed above, and Chung also discloses that the fluid controller comprises a housing (see Fig.

4) having a flange (see Fig. 4 - outer periphery of housing beyond dashed line) that connects to the bladder (26).

As to claim 54, Chung discloses the inflatable device of claim 30 as discussed above, and Chung also discloses that the bladder (26) forms a mattress (col. 2, line 16, wherein it states "airbed").

As to claim 57, Chung discloses the inflatable device of claim 30 as discussed above, and Chung also discloses that the fluid controller (30) comprises a valve (304 or 306) through which the air exits the bladder (26).

The examiner notes that Merriam-Webster's Collegiate® Dictionary (Tenth Edition, Copyright 1997, published by Merriam-Webster, Incorporated, Springfield, Massachusetts, U.S.A.) defines a valve as "any of numerous mechanical devices by which the flow of liquid, gas, or loose material in bulk may be started, stopped, or regulated by a movable part that opens, shuts or partially obstructs one or more ports or passageways." Thus, the air inlet (304) and the air outlet (306) constitute valves.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung (U.S. Patent No. 6,332,760).

As to claim 15, Chung discloses the inflatable device of claim 14 as discussed above, but Chung fails to explicitly disclose that the electro-mechanical connection comprises a solenoid.

The examiner is taking Office Notice that solenoids for providing an electro-mechanical connection between a valve and a switch are old and notoriously well-known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the inflatable device of Chung to include a solenoid for providing the electro-mechanical connection between the valve and the switch in order to actuate the valve.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,793,469 and U.S. Patent Application Publication No. 2001/0026763 to Chen Chung Wang disclose an inflatable product equipped with a pump (see in particular, 8th and 9th embodiments shown in Figs. 13A&B and 14 which do not require reverse fitting of air pump). U.S. Patent Application Publication Nos. 2003/0215340, 2004/0037717, and 2005/0118046 to Cheng Chung Wang all disclose an inflatable product with an electric pump. U.S. Patent Application Publication Nos. 2002/0194678 and 2005/0186097 to Cheng Chung Wang disclose an inflatable product with switching pipe. U.S. Patent Application Publication No. 2003/0099560 and U.S. Patent No. 6,679,686 to Cheng Chung Wang disclose a motor-driven air pump with inflating and deflating mode. U.S. Patent No. 6,733,254 to Yen

discloses an air pumping and extracting duplex pump. U.S. Patent No. 2004/0241014 to Yen discloses a two-way mounting mode air pump. U.S. Patent No. 6,709,246 to Boyd discloses an inflation and deflation device having a spring biased valve. U.S. Patent No. 6,836,914 to Tsai discloses an air-cushioned bed with built-in air blower. U.S. Patent No. 5,890,882 to Feldman discloses an inflator with drop-in batteries and universal adapters. U.S. Patent No. 4,990,060 to Cheng Chung Wang discloses an air pump with secondary air inlet. U.S. Patent No. 6,571,412 to Wu discloses multiple tube combination structure. U.S. Patent No. 3,112,502 to Forsberg discloses a pump for an air mattress. U.S. Patent Application Publication No. 2005/0047923 to Li et al. discloses a compact linear air pump and valve package. U.S. Patent No. 4,711,275 to Ford et al. discloses an air supply and control apparatus for an inflatable mattress. U.S. Patent No. 5,203,808 to Ide discloses a water bed with compact built-in drain pump. U.S. Patent No. 4,986,738 to Kawasaki et al. discloses an airflow control system pump and housing. U.S. Patent No. 6,722,306 to Wang discloses an air pump having minimum number of parts. U.S. Patent No. 5,904,172 to Gifft et al. discloses a valve enclosure assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571)-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. However, this fax phone number is being phased out and will no longer be in service after September 15, 2005. The new fax phone number beginning July 15, 2005 is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gay Ann Spahn, Patent Examiner
August 31, 2005

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